



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/683,922 | 03/01/2002 | David F. Hare | 56162.000351 | 3799 |
| 21967 | 7590 | 09/21/2005 | EXAMINER | |
| HUNTON & WILLIAMS LLP INTELLECTUAL PROPERTY DEPARTMENT 1900 K STREET, N.W. SUITE 1200 WASHINGTON, DC 20006-1109 | | | DOAN, DUYEN MY | |
| | | ART UNIT | | PAPER NUMBER |
| | | 2143 | | |
| DATE MAILED: 09/21/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|------------------------------|------------------------|---------------------|--|
| | 09/683,922 | HARE ET AL. | |
| Examiner | Art Unit | | |
| | Duyen M. Doan | 2143 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 03 June 2002.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) _____ is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-41 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 01 March 2002 is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/3/02.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ .
5) Notice of Informal Patent Application (PTO-152)
6) Other: ____ .

DETAILED ACTION

Claims 1-41 are presented for examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-41 are rejected under 35 U.S.C. 102(e) as being anticipated by Ortega et al (us pat 6,711,162) (hereinafter Ortega).

As regarding claim 1, Ortega disclosed receiving, at a gateway, a non-PPPoE frame from the client, wherein the non-PPPoE frame includes data intended for receipt by the access concentrator (col.9, lines 53-67, conversion between PPPoE and PPP frames); encapsulating, at the gateway, the first non-PPPoE frame to generate a PPPoE frame, wherein the PPPoE frame includes the data intended for receipt by the access concentrator (col.11, lines 18-25, col.18, lines 44-67); and providing the PPPoE frame to the access concentrator from the gateway (col.11, lines 18-25, col.18, lines 44-67).

As regarding claim 2, Ortega disclosed the step of initiating a PPPoE session between the gateway and the access concentrator for the client (col.9, lines 53-67).

As regarding claim 3, Ortega disclosed the non-PPPoE frame includes an IP packet (col.1, lines 62-67, col.8, lines 52).

As regarding claim 4, Ortega disclosed the gateway includes one of a group consisting of: a digital subscriber line modem, a cable modem, a router, and a wireless access point (col.2, lines 38-64).

As regarding claim 5, Ortega disclosed receiving, at an input interface, the non-PPPoE frame from the clients (see figure 7, forwarding non-PPPoE from the hub to PPP/PPPoE encapsulation engine); providing the non-PPPoE frame to a bridge; forwarding the non-PPPoE frame to a PPPoE stack from the bridge see (figure 7).

As regarding claim 6, Ortega disclosed the input interface includes an Ethernet interface (col.7, line 25).

As regarding claim 7, Ortega disclosed modifying the non-PPPoE frame to generate a PPPoE frame includes the steps of: adding, at the PPPoE stack, a PPP header to the non-PPPoE frame to generate a PPPoE frame (col.24, lines 1-13); and adding, at the PPPOE stack, a PPPoE header to the PPPoE frame to generate a PPPoE frame (col.24, lines 1-13).

As regarding claim 8, Ortega disclosed providing the PPPoE frame from the PPPoE stack to a frame reflector; providing the PPPOE frame from the frame reflector to the bridge; and providing the PPPoE frame from the bridge to an output interface for

output to the access concentrator (see figure 7, after encapsulation the packet will go to the bridge).

As regarding claim 9, Ortega disclosed the output interface includes a UTOPIA interface (col.11, line 58).

As regarding claim 10, Ortega disclosed the output interface further includes a RFC 1483 interface (col.7, lines 31-36).

As regarding claim 11, Ortega disclosed receiving, at the gateway, a PPPoE frame from the access concentrator, wherein the PPPoE frame includes data intended for receipt by the client (col.9, lines 53-67, col.10, lines 1-22); modifying, at the gateway, the PPPoE frame to generate a non-PPPoE frame, wherein the non-PPPoE frame includes the data intended for receipt by the client (col.9, lines 53-67, col.10, lines 1-22, proxy service will convert between PPP and PpoE); and providing the non-PPPoE frame to client from the gateway (col.10, lines 1-22).

As regarding claim 12, Ortega disclosed receiving, at a gateway, a PPPOE frame from the access concentrator, wherein the PPPOE frame includes data intended for receipt by the client (col.23, lines 63-67, col.24, lines 1-13); deencapsulating, at the gateway, the PPPOE frame to generate a non-PPPOE frame, wherein the non-PPPOE frame includes the data intended for receipt by the client (col.23, lines 67, col.24, lines 1-3, stripping off the PPPOE frame); and providing the non-PPPOE frame to the client from the gateway (col.24, lines 1-13).

As regarding claim 13, Ortega disclosed initiating a PPPoE session between the gateway and the access concentrator for the client (col.23, lines 23-67, col.24, lines 1-13).

As regarding claim 14, Ortega disclosed the non-PPPoE frame includes an IP packet (col.1, lines 62-67, col.8, lines 52).

As regarding claim 15, Ortega disclosed the gateway includes one of a group consisting of: a digital subscriber line modem, a cable modem, a router, and a wireless access point (col.2, lines 38-64).

As regarding claim 16, Ortega disclosed receiving, at an input interface, the PPPoE frame from the access concentrator (col.11, lines 10-25); providing the PPPoE frame to a bridge (col.11, lines 10-25); and providing the PPPoE frame from the bridge to a PPPoE stack using a frame reflector (col.11, lines 10-25).

As regarding claim 17, Ortega disclosed the input interface includes a UTOPIA interface (col.11, line 58).

As regarding claim 18, Ortega disclosed the input interface further includes a RFC 1483 interface (col.7, lines 31-36).

As regarding claim 19, Ortega disclosed removing, at the PPPoE stack, a PPPoE header from the PPPoE frame to generate a PPP frame (col.23, lines 63-67, col.24, lines 1-13); and removing, at the PPPoE stack, a PPP header from the PPP frame to generate a non-PPPoE frame (col.23, lines 63-67, col.24, lines 1-13).

As regarding claim 20, Ortega disclosed providing the non-PPPoE frame from the PPPoE stack to the frame reflector (col.24, lines 1-53); providing the non-PPPoE

frame from the frame reflector to the bridge; and providing the non-PPPoE frame from the bridge to an output interface for output to the client (see figure 7, after encapsulation the frame will go to the bridge).

As regarding claim 21, Ortega disclosed the output interface includes an Ethernet interface (col.11, lines 25, also see figure 7).

As regarding claim 22, Ortega disclosed receiving, at a bridge, a first frame having a PPPoE format from a first client (col.18, lines 60-67, col.19, lines 1-36), wherein the first frame is intended for receipt by an access concentrator (col.18, lines 60-67, col.19, lines 1-36); receiving, at the bridge, a second frame having a non-PPPoE format from a second client, wherein the second frame is intended for receipt by an access concentrator (col.18, lines 60-67, col.19, lines 1-36); providing, from the bridge, the first frame to an interface for output to an access concentrator (col.18, lines 60-67, col.19, lines 1-36); providing, from the bridge, the second frame as an IP packet to an IP stack; routing the IP packet to a PPPoE stack (col.18, lines 60-67, col.19, lines 1-36, convert ppp to pppoe); encapsulating, at the PPPoE stack, the IP packet into a third frame having a PPPoE format (col.18, lines 60-67, col.19, lines 1-36, encapsulate ppp/pppoe); and providing the third frame to the interface for output to an access concentrator (col.18, lines 60-67, col.19, lines 1-36).

As regarding claim 23, Ortega disclosed the first client is adapted to support a PPPoE session and the second client is not adapted to support a PPPoE session (col.18, lines 60-67, col.19, lines 1-36).

As regarding claim 24, Ortega disclosed the first frame and the second frame are intended for receipt by a same access concentrator (col.18, lines 60-67, col.19, lines 1-36).

As regarding claim 25, Ortega disclosed determining a destination media access control address of the first frame (col.18, lines 60-67, col.19, lines 1-36); and providing the first frame to the interface when the destination media access control address of the first frame includes a media access control address of a network device accessible by the interface (col.18, lines 60-67, col.19, lines 1-36).

As regarding claim 26, Ortega disclosed determining a destination media access control address of the second frame; and providing the second frame as the IP packet to the IP stack when the destination media access control address of the second frame is an media access control address of an interface attached to the bridge (col.18, lines 60-67, col.19, lines 1-36).

As regarding claim 27, Ortega disclosed adding a PPP header to the IP packet to generate a modified frame; and adding a PPPoE header to the modified frame to generate the third frame (col.23, lines 63-67, col.24, lines 1-13).

As regarding claim 28, Ortega disclosed assigning a destination media access control address to the third frame corresponding to a media access control address of a frame reflector used to transmit the third frame between the PPPoE stack and the bridge (col.19, lines 1-36); providing the third frame to the bridge using the frame reflector; and providing, at the bridge, the third frame to the output interface based on the destination media access control address of the third frame (col.19, lines 1-36).

As regarding claim 29, Ortega disclosed receiving, at the bridge, a fourth frame having a PPPoE format from an access concentrator, wherein the fourth frame from the access concentrator is intended for receipt by the first client, and where the first client is adapted to receive frames having the PPPoE format (col.9, lines 53-67, col.10, lines 13-42); receiving, at the bridge, a fifth frame having a PPPoE format from the access concentrator, wherein the fifth frame is intended for receipt by the second client, and where the second client is adapted to receive frames having a non-PPPoE format (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25); providing, from the bridge, the fourth frame to an interface for output to the first client (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25); providing, from the bridge, the fifth frame to a PPPoE stack using a frame reflector (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25); deencapsulating, at the PPPoE stack, the fifth frame to generate a sixth frame having the non-PPPoE format (col.11, lines 10-25); and providing the sixth frame to the interface for output to the second client (col.11, lines 10-25).

As regarding claim 30, Ortega disclosed a first interface adapted to receive a first frame having a non-PPPoE format from a first client and to provide a second frame having a non-PPPoE format to the first client (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25); a second interface adapted to receive a third frame having a PPPoE format from an access concentrator and to provide a fourth frame having a PPPoE format to the access concentrator (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25); a PPPoE stack adapted to encapsulate the first frame having a non-PPPoE format into the fourth frame having a PPPoE format, and wherein the PPPoE

stack further is to deencapsulate the third frame having a PPPoE format into the second frame having a non-PPPoE format (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25, col.18, lines 44-67); a bridge coupled to the first interface and the second interface, wherein the bridge is adapted to provide the fourth frame to the second interface for output to the access concentrator and to provide the second frame to the first interface for output to the first client (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25, col.19, lines 4-29); an IP stack coupled to the PPPoE stack and the bridge, wherein the IP stack is adapted to route the first frame from the bridge to the PPPoE stack and to route the second frame from the PPPoE stack to the bridge (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25, col.19, lines 4-29); and a frame reflector coupled to the PPPoE stack and the bridge, wherein the frame reflector is adapted to provide the fourth frame to the bridge from the PPPoE stack and to provide the first frame from the bridge to the PPPoE stack (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25, col.19, lines 4-29).

As regarding claim 31, Ortega disclosed the first interface includes an Ethernet interface (col.7, line 25).

As regarding claim 32, Ortega disclosed the second interface includes a UTOPIA interface (col.11, lines 58).

As regarding claim 33, Ortega disclosed the second interface includes a UTOPIA interface (col.7, lines 31-36).

As regarding claim 34, Ortega disclosed a PPP client layer coupled to the bridge, wherein the PPP client layer is adapted to initiate a PPPoE session between the PPP

client layer and the access concentrator, and where the PPP client layer is adapted to add a PPP header to the first frame and to remove a PPP header from the third frame (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25, col.19, lines 4-29); and a PPPoE client layer coupled to the PPP client layer and to the frame reflector, wherein the PPPoE client layer is adapted to add a PPPoE header to the first frame and to remove a PPPoE header from the third frame (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25, col.19, lines 4-29).

As regarding claim 35, Ortega disclosed the first interface includes a first media access control address client (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25); the second interface includes a second media access control address; the frame reflector includes a third and fourth media access control address client (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25); and wherein the bridge is adapted to route the first frame, the second frame, the third frame, and the fourth frame based on a destination media access control address of each frame client (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25).

As regarding claim 36, Ortega disclosed a first interface adapted to receive a first non-PPPoE frame from a first client and to provide a second non-PPPoE frame to the first client (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25, col.18, lines 44-67); a second interface adapted to provide a first PPPoE frame to an access concentrator and to receive a second PPPoE frame from the access concentrator (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25, col.18, lines 44-67); a means for encapsulating the first non-PPPoE frame to generate the first PPPoE frame (col.18,

lines 44-67); and a means for deencapsulating the second PPPoE frame to generate the second non-PPPoE frame (col.18, lines 44-67).

As regarding claim 37, Ortega disclosed the first interface further is adapted to receive a third PPPoE frame from a second client and to provide a fourth PPPoE frame to the second client (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25, col.18, lines 44-67); the second interface further is adapted to receive the fourth PPPoE frame from an access concentrator and to provide the third PPPoE frame to the access concentrator (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25, col.18, lines 44-67).

As regarding claim 38, Ortega disclosed a means for providing the third PPPoE frame from the first interface to the second interface; and a means for providing the fourth PPPoE frame from the second interface to the first interface (col.9, lines 53-67, col.10, lines 13-42, col.11, lines 10-25, col.18, lines 44-67).

As regarding claim 39, Ortega disclosed the first interface includes an Ethernet interface (col.7, line 25).

As regarding claim 40, Ortega disclosed the second interface includes a UTOPIA interface (col.11, line 58).

As regarding claim 41, Ortega disclosed the second interface further includes a RFC 1483 interface (col.7, lines 31-36).

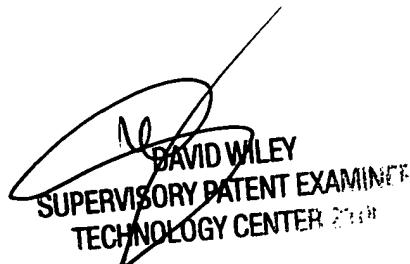
Art Unit: 2143

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duyen M. Doan whose telephone number is (571) 272-4226. The examiner can normally be reached on 9:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner
Duyen Doan
Art unit 2143



DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2030